

Work Order ID 58814

Page 1

Wednesday, May 19, 2010 9:27:13 AM

Item ID: D350-636-014

Accept



Setup Start



Revision ID:

Item Name: Skidtube RH

Stop



Start Date: 5/19/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 5/26/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

10-5-19

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2750

Rev F

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-014 CHG 005

8 10/06/18

J. Cor BG 10/06/17

B 58814

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Stop

Sequence ID/
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NumberDraw
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QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Mark cut line on aft end of D2600-3-Bent using Jig DT 8150. Cut to length as per Dwg D2750. Deburr end

2-Drill pilot holes as per Dwg D2750 sheet 7 (D2750-4 details).Drill using drill Jig DT8150 & DT8864 .

3- Mark fwd end for cutting using Drill Jig DT 8150 & DT8864 and cut as per dwg D2750. Deburr.

4- Drill fwd step holes using DT9616. Ensure proper positioning.

5-Drill pilot holes for blade fitting bolt using DT8983. Open to 0.500".

6- locate DT8929 off of blade fitting holes and drill pilot holes for blade fitting.

7-Open up holes for section BE-BE to 0.375 (2 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open holes for ground handling and detail A-B to 0.500" (8 holes per side)

8-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 and open to 0.297"

9-Open up holes of Detail A-A to 0.297" (total of 2 holes per side)

10-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left from bending as per QSI 004

A/R ☐ ☐ Aluminum Rod☒ M112860

86

10/05/01

M 10/05/01

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Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Grind welds flush as per Dwg D2750

12- scribe batch #.

N 10/6/2

120

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

S 106662

S 106662

④

W/O:		WORK ORDER CHANGES					
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Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							
150 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							

1 M 10/26/02

DP 10-6-2

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Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open up holes section BE-BE 0.500" (4 per side) as per dwg D2750

2-Open holes section BC-BC 0.3125" (4 per side)

3-Open up holes of Detail AB and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

4-Chamfer holes of section BE-BE, BC-BC, AB and ground handling (welding instructions on sheet 11)

5-Deburr and blow out all chips from inside of tube. Prepare tube for welding, remove alodine as required.

6-Bond web D2739 in place as per QSI 015

A/R ☐☐☐ Sikaflex-291

batch: M113425

exp. date: 7/1/11

7- Weld spacers D3490-1, D3490-5 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 11)

A/R ☐☐☐ Aluminum Rod batch: M114242

8-Grind welds flush as per Dwg D2750

9-Spot face ground handling holes (total of 4 places per side) as per dwg D2750

10-Deburr holes

M 10/06/02

BE 10/06/07

BE 10/06/07

3 BE 10/06/08

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Run Start



Stop

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NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S 1066108

Memo

0.00

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 1066108

Memo

0.00

④

190



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

m

10

06

15

①

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

M 114841

Memo

0.00

Powder Coating

START TIME: 8:30
OVEN TEMPERATURE: 320°
FINISH TIME: 9:00

① 10-6-16

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

Inspect for foreign object per QSI 024

HL 10/06/16

①

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

230



HandFinish

HandFinishing

0.00

Memo

0.00

Hand Finishing

- 1-Install inserts as per dwg D2750
- 2-assemble o-ring as per dwg D3492 and apply o-ring lube
A/R 55-o-ring lube batch: 1114189
- 3-Assemble tube hardware as per dwg D2750 sikaflex batch: 1113519
10/11
- 4-Inspect For Foreign Objects
- 5-Spray inside of tube with "LPS-3" batch: 1011
- 6-Install blade fitting D3488-041, wearshoe
SIKA FLEX 241
BATCH: 1113519
EXP DATE: 10/11
- 7-assemble o-ring to plug as per dwg D3492 and apply o-ring lube
A/R 55-o-ring lube batch: 1114189
- 8-Coat all exposed fasteners with "LPS Procyon" batch: 11104231

5/19/10 10/06/17 1 0

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00



QC

8/10/06/17 Notes samples - OK
Memo

0.00

8/10/06/17

(H)

Quality Control

250

Pick Kit

0.00



Packaging

Memo

0.00

10-8-17 SP

Packaging

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

8/10/06/18

(H)

Quality Control

W/O:		WORK ORDER CHANGES					
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
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Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

0.00



Packaging

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-014

doc 72 Revtl

10-6-18

280

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

10/06/21
MF
10-6-18

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item Name: Skidtube RH

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
IPP Rev:I 05.12.08 Rearranged procedure steps EC
IPP Rev:J 06.03.30 Per rev. D EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110

Each

2.0000

1



Extrusion Bent

Location

Loc Qty

Loc Code

LG

2

55462

1

57538

1

D2739

Manufactured No

160

Each

1.0000

1



350 I Beam

Location

Loc Qty

Loc Code

LG

1

57948

1

D2743

Manufactured No

160

Each

114.0000

8



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

114

50281

10

52310

24

57953

80

D2744

Manufactured No

160

Each

28.0000

1



Cap

Location

Loc Qty

Loc Code

LG

28

47488

10

51922

18

1358903 M 10/06/01

1358904 1 M 10/06/02

859111 (x3) BE 10/06/07

5 BE 10/06/04

1 M 10/06/01

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Start Qty: 1.00

Required Qty: 1.00

D3490-1 Manufactured No 160 Each 25.0000 4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

25

57723

25



B 59228 *4 BE 10/06/04

D3490-5 Manufactured No 160 Each 46.0000 4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

46

43015

6

46490

40



4 BE 10/06/04

ALS4-1032-225 Purchased No 230 Each 7,062.000 38



Insert

Location

Loc Qty

Loc Code

PK011

7062

110768

7062



x38 20 10/06/10

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 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C5A Purchased No 230 Each 453.0000 34



Bolt



Location	Loc Qty	Loc Code
ST350	325	
114330	125	114808
114523	200	
ST351	128	
113121	10	
114108	45	
114181	73	

x34 10/06/16

AN3C6A Purchased No 230 Each 565.0000 4



BOLT



Location	Loc Qty	Loc Code
ST351	565	
111982	565	

x4 10/06/16

AN6C44A Purchased No 230 Each 101.0000 4



BOLT



Location	Loc Qty	Loc Code
FG	2	
103964	2	1144442
ST344	99	
111649	2	
114455	47	
114653	50	

x4 10/06/16

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Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

AN8C35A Purchased No 230 Each 56.0000 1



BOLT

Location Loc Qty Loc Code

FP 6

110847 6

ST346 50

114442 50

AN960C10L Purchased No 230 Each 0.0000 38



washer

* NAS 1149 C0332R / 114341

AN960C816L Purchased No 230 Each 106.0000 1



WASHER

Location Loc Qty Loc Code

ST348 106

10584 100

111424 6

D2745 Manufactured No 230 Each 146.0000 8



Bushing

Location Loc Qty Loc Code

ST023 146

52311 69

57914 77

X 24 10/06/10

X 38 24 10/06/10

X 1 24 10/06/10

X 4 24 10/06/10

Wednesday, May 19, 2010 9:27:17 AM

Shop Packet Print

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Wednesday, May 19, 2010 9:27:17 AM

Page 5

Work Order ID: 58814



Parent Item: D350-636-014



Parent Item Name: Skidtube RH

Start Date: 5/19/2010

Required Date: 5/26/2010

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ

Start Qty: 1.00

Required Qty: 1.00

IPP Rev:I 05.12.08 Rearranged procedure steps EC

IPP Rev:J 06.03.30 Per rev. D EC

IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

D3488-042 Manufactured No 230 Each 19.0000 1



Blade Fitting Assembly, RH



Location

Loc Qty

Loc Code

FP008

19

53918

19

D3492-1 Manufactured No 230 Each 58.0000 8



Plug



X1 H 10/06/16

Location

Loc Qty

Loc Code

FP

58

47658

24

48274

34

replaces D3492-041

D3492-5 Manufactured No 230 Each 39.0000 8



Plug



X8 H 10/04/16

Location

Loc Qty

Loc Code

FP

39

1351638

47659

39

replaces D3492-045

D3535-25 Manufactured No 230 Each 13.0000 1



Wearshoe



X1 H 10/06/16
X7 H 10/06/16

Location

Loc Qty

Loc Code

FP18

13

1359150

57943

13

X1 H 10/06/17

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Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 6

Work Order ID: 58814

Parent Item: D350-636-014

Parent Item Name: Skidtube RH

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
 IPP Rev:I 05.12.08 Rearranged procedure steps EC
 IPP Rev:J 06.03.30 Per rev. D EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

D3536-25 Manufactured No 230 Each 6.0000 1



Gasket

Location Loc Qty Loc Code

FP12 6 1358920
 57944 6

x1 M 10/06/17

D3537-1 Manufactured No 230 Each 24.0000 3



Wearpad

Location Loc Qty Loc Code

FP 1
 55465 1 1359710
 FP17 23
 57256 23

x3 M 10/06/17

D3631-1 Manufactured No 230 Each 206.0000 8



Washer

Location Loc Qty Loc Code

ST076 206
 52693 206 1354388

x8 M 10/06/17

D3672-1 Manufactured No 230 Each 1,375.000 4



Phenolic Washer

Location Loc Qty Loc Code

ST077 1375
 51674 375
 52505 1000

x4 M 10/06/17

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 19, 2010 9:27:17 AM

Page 7

Work Order ID: 58814



Parent Item: D350-636-014



Parent Item Name: Skidtube RH

Start Date: 5/19/2010

Required Date: 5/26/2010

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ

Start Qty: 1.00

Required Qty: 1.00

IPP Rev:I 05.12.08 Rearranged procedure steps EC

IPP Rev:J 06.03.30 Per rev. D EC

IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

D3791-1 Manufactured No 230 Each 5.0000 1



Wearplate



Location

Loc Qty

Loc Code

FP17

5

B358906

X1 M 10/06/17

56299

5

D3793-1 Manufactured No 230 Each 10.0000 1



Wearshoe



Location

Loc Qty

Loc Code

FP18

10

B359151

X1 M 10/06/17

56300

1

57945

9

D3793-3 Manufactured No 230 Each 11.0000 1



Wearshoe



Location

Loc Qty

Loc Code

FP19

11

B359152

X1 M 10/06/17

57947

11

D3794-1 Manufactured No 230 Each 32.0000 1



Gasket



Location

Loc Qty

Loc Code

FP010

26

B359027

X1 M 10/06/17

57942

26

FP014

6

57537

6

*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

Picklist Print

Wednesday, May 19, 2010 9:27:17 AM

Page 8

Work Order ID: 58814



Parent Item: D350-636-014



Parent Item Name: Skidtube RH

Start Date: 5/19/2010

Required Date: 5/26/2010

Comments:

IPP Rev:H 02.09.25 Rearranged procedure steps KJ

IPP Rev:I 05.12.08 Rearranged procedure steps EC

IPP Rev:J 06.03.30 Per rev. D EC

IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Qty: 1.00

Required Qty: 1.00

D3794-3

Manufactured No

230

Each

14.0000

1



Gasket

Location

Loc Qty

Loc Code

FP18

14

1359153

x1 M 10/06/17

56066

14

MS21043-6

Purchased

No

230

Each

826.0000

4



NUT

Location

Loc Qty

Loc Code

ST301

826

826

x4 M 10/06/17

112314

MS21083C8

Purchased

No

230

Each

41.0000

1



NUT

Location

Loc Qty

Loc Code

ST303

41

11

30

1114934

x1 M 10/06/17

113845

114523

NAS1611-005

Purchased

No

230

Each

309.0000

1



O-RING

Location

Loc Qty

Loc Code

FP002

309

209

100

106099

114220

x2 M 10/06/17

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Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 19, 2010 9:27:17 AM

Page 9

Work Order ID: 58814



Parent Item: D350-636-014



Parent Item Name: Skidtube RH

Start Date: 5/19/2010

Required Date: 5/26/2010

Comments: IPP Rev:H ☐ 02.09.25 ☐ Rearranged procedure steps ☐ KJ ☐
IPP Rev:I ☐ 05.12.08 ☐ Rearranged procedure steps ☐ EC ☐
IPP Rev:J ☐ 06.03.30 ☐ Per rev. D ☐ EC ☐
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

306.0000

1



O-RING

Location

Loc Qty

Loc Code

FP

306

110715

100

110915

206

PTO =)

AN8C21A

Purchased

No

250

Each

113.0000

2



BOLT

Location

Loc Qty

Loc Code

ST345

113

111605

23

113558

50

114653

40

AN960C816L

Purchased

No

250

Each

106.0000

1



WASHER

Location

Loc Qty

Loc Code

ST348

106

110584

100

111424

6

D2741

Manufactured

No

250

Each

28.0000

1



Blade, 350 Skidtube

Location

Loc Qty

Loc Code

ST466

28

55905

28

Wednesday, May 19, 2010 9:27:17 AM

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Page 9

W/O: 58814		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/06/17	230	Replace "O" Rings NAS 1611-010 for "O" Rings D 2594-3 / B 59358	M	10/06/17	X8		<i>[Signature]</i> 10/06/17

Part No: D350-636-014 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 19, 2010 9:27:17 AM

Page 10

Work Order ID: 58814



Parent Item: D350-636-014



Parent Item Name: Skidtube RH

Start Date: 5/19/2010

Required Date: 5/26/2010

Comments:

IPP Rev:H 02.09.25 Rearranged procedure steps KJ

IPP Rev:I 05.12.08 Rearranged procedure steps EC

IPP Rev:J 06.03.30 Per rev. D EC

IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250 Each

33.0000

2



Washer



10-6-17 SP

Location

Loc Qty

Loc Code

ST065

33

57825

33

D3672-13

Purchased

No

250 Each

894.0000

2



Phenolic Washer



10-6-17 SP

Location

Loc Qty

Loc Code

ST077

894

54363

894

MS21083C8

Purchased

No

250 Each

41.0000

1



NUT



M114934 10-6-17 SP

Location

Loc Qty

Loc Code

ST303

41

113845

11

114523

30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 58814

BS10-5-19

RELEASED
6-27-19

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3536-13/-35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.16		
DART AEROSPACE USA, INC. PORT HADLOCK, WA			
DRAWING NO. D2750		REV. F SHEET 1 OF 11	
TITLE 350 SKIDTUBE ASSEMBLY		SCALE NTS	
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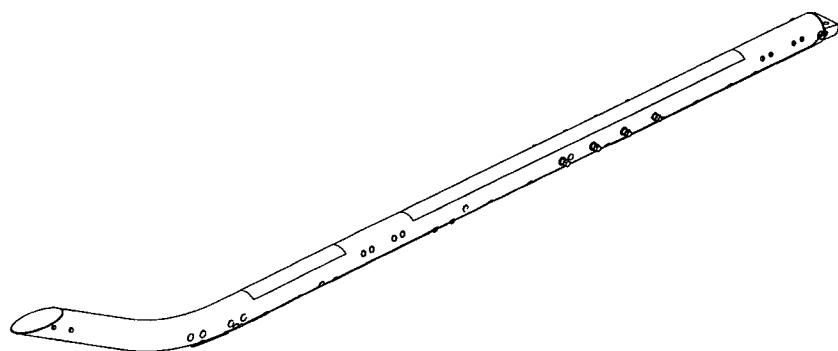
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

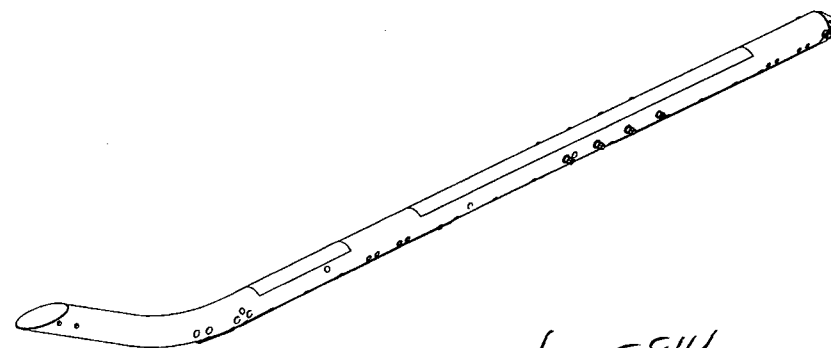
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

W/0 58814

RELEASED
68-29-22-144

DESIGN	PCY	DART AEROSPACE USA, INC.	
DRAWN	AM	PORT HADLOCK, WA	
CHECKED	AM	DRAWING NO.	REV. F
MFG. APPR.	AM	D2750	SHEET 2 OF 11
APPROVED	AM	TITLE	SCALE
DE APPR.	AM	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

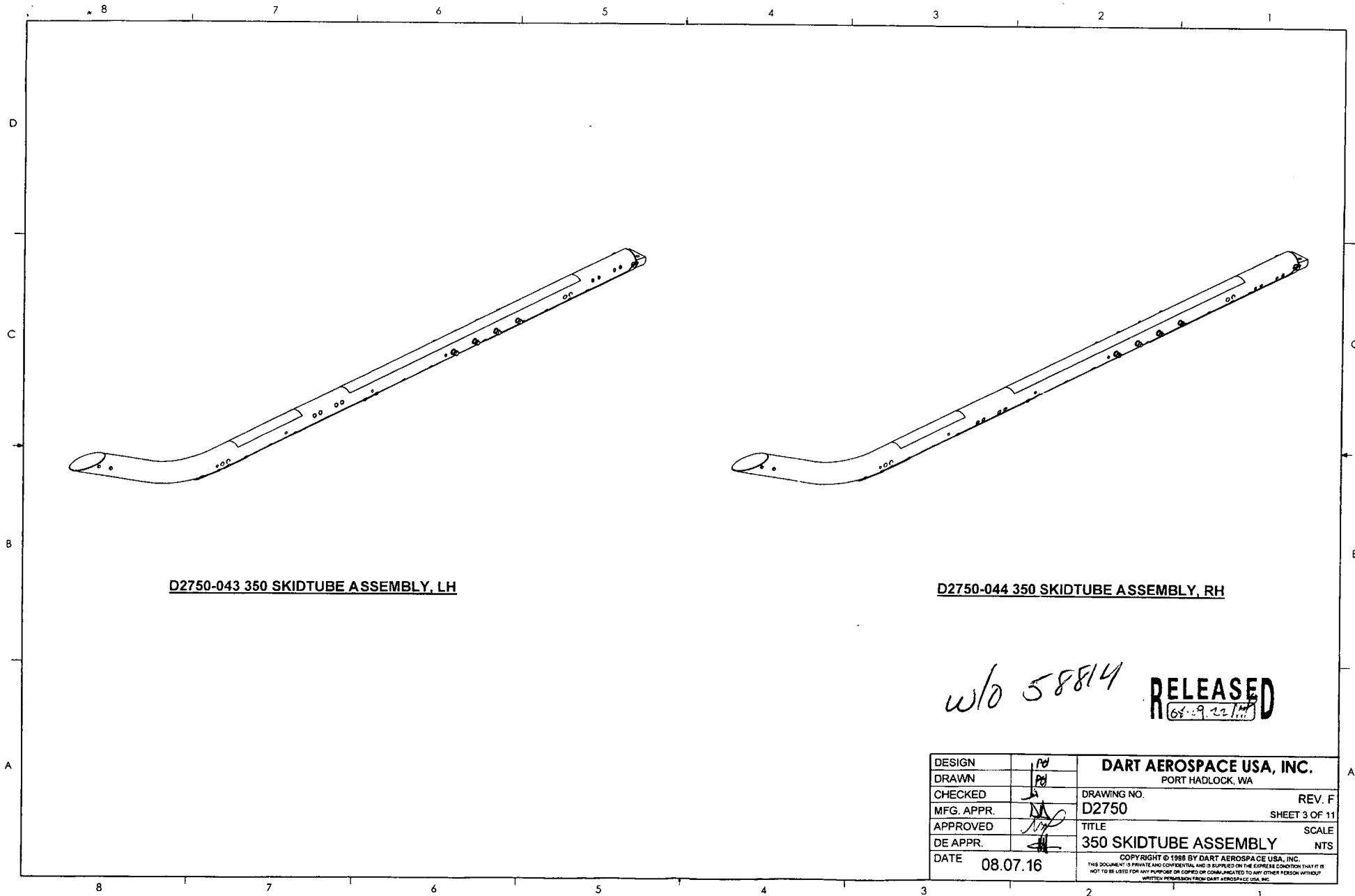
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



w/o 58814

RELEASED
68-9-22/100

DESIGN	PD	DART AEROSPACE USA, INC.	
DRAWN	PD	PORT HADLOCK, WA	
CHECKED	J	DRAWING NO.	REV. F
MFG. APPR.	MA	D2750	SHEET 3 OF 11
APPROVED	MA	TITLE	SCALE
DE APPR.	MA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

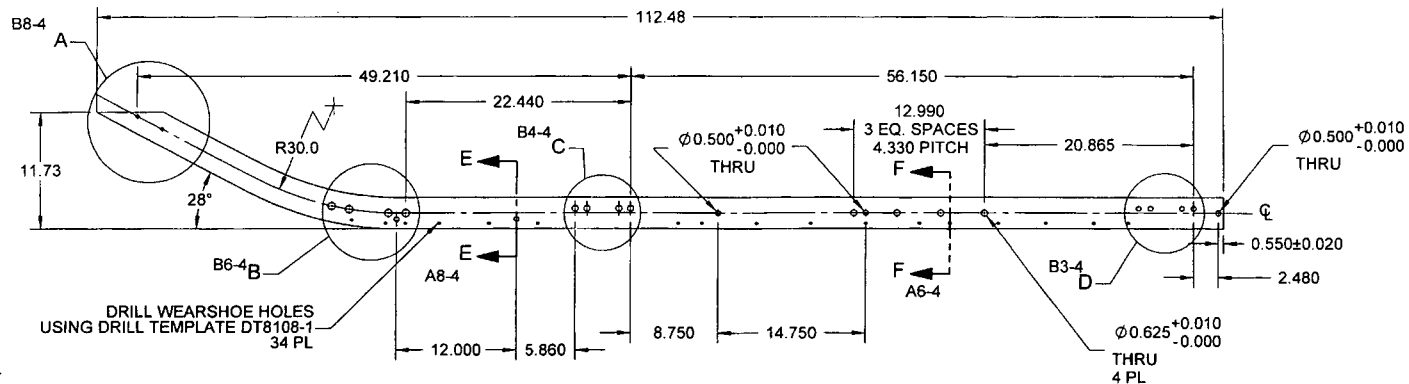
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

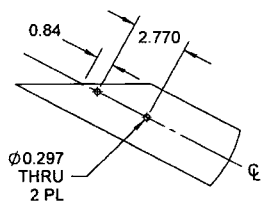
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

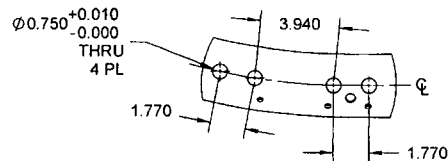
NOTE: Date & initial all entries



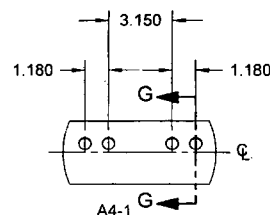
D2750-1 LH SKIDTUBE



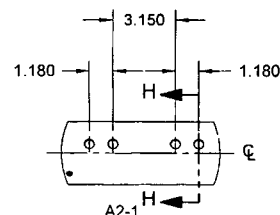
DETAIL A
SCALE 2X



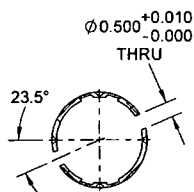
DETAIL B
SCALE 2X



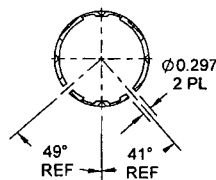
DETAIL C
SCALE 2X



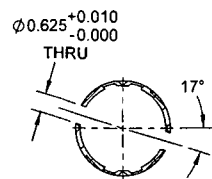
DETAIL D
SCALE 2X



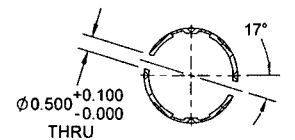
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

W/0 58814

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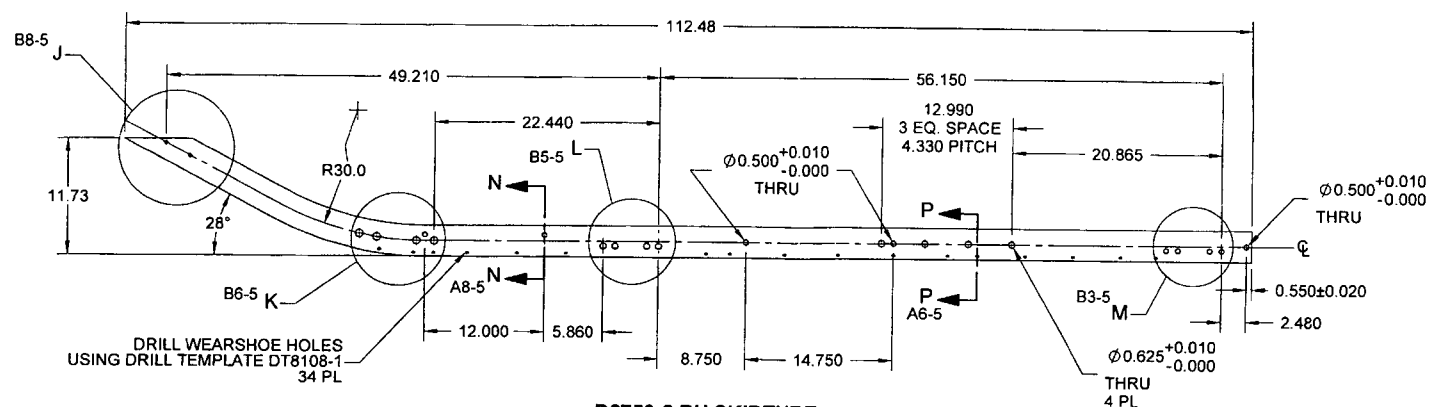
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

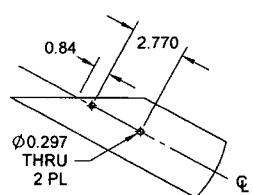
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

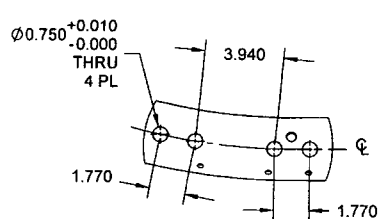
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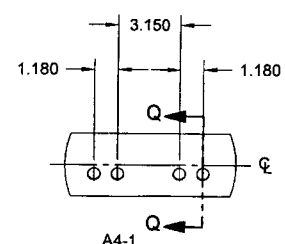
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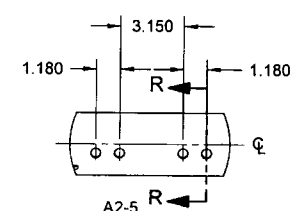
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SCALE 2X



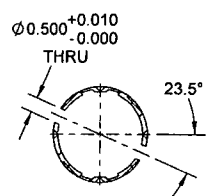
DETAIL K
SCALE 2X



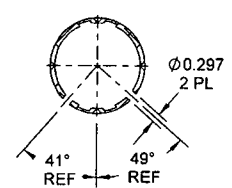
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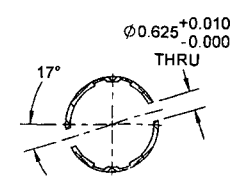
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SCALE 2X



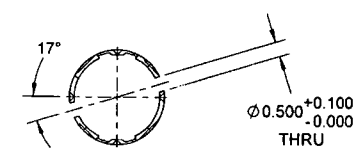
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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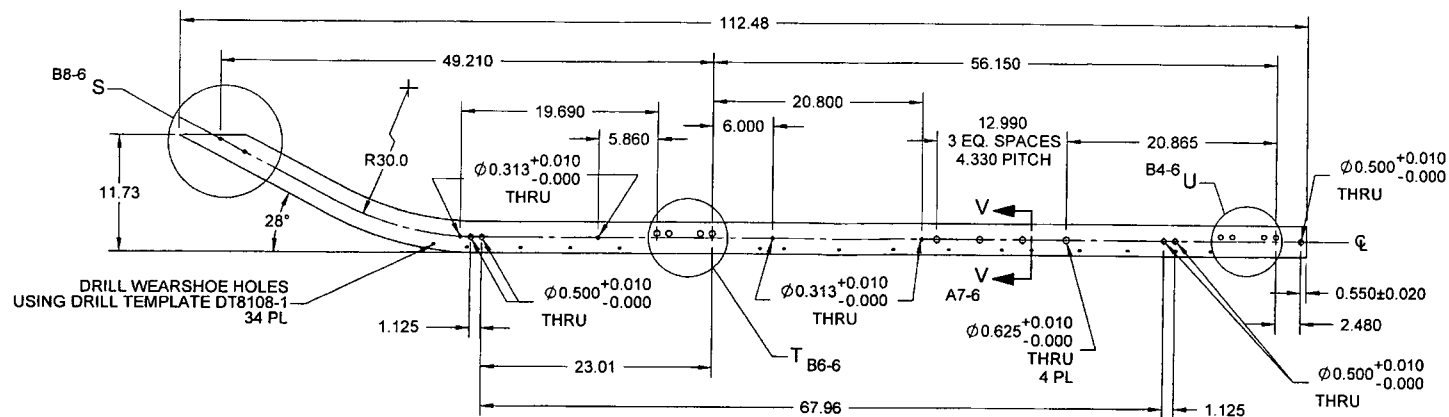
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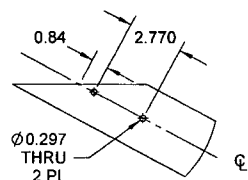
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

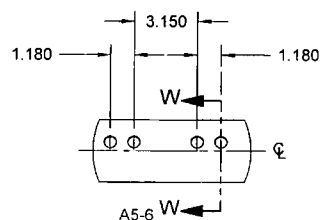
NOTE: Date & initial all entries



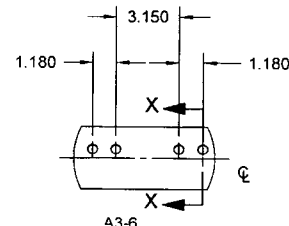
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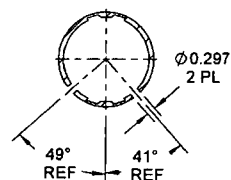
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SCALE 2X



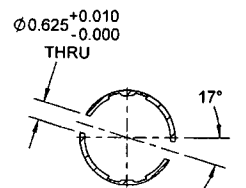
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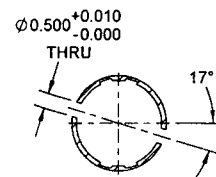
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL



SECTION W-W
SCALE 3X, 4 PL



SECTION X-X
SCALE 3X, 4 PL

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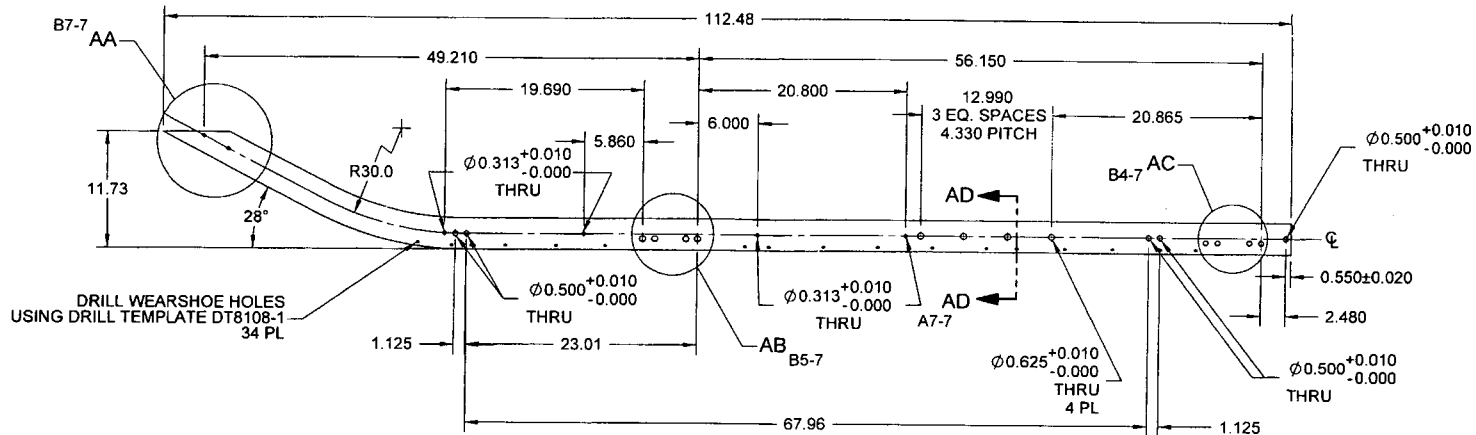
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

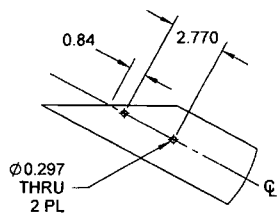
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

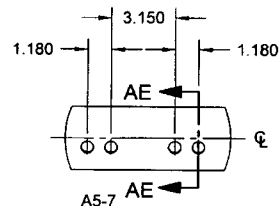
NOTE: Date & initial all entries



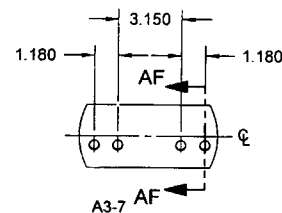
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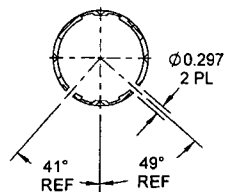
DETAIL AA
SCALE 2X



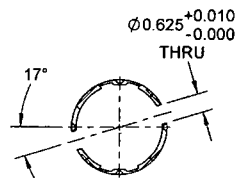
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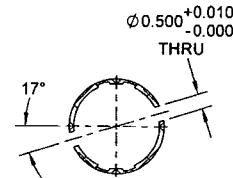
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

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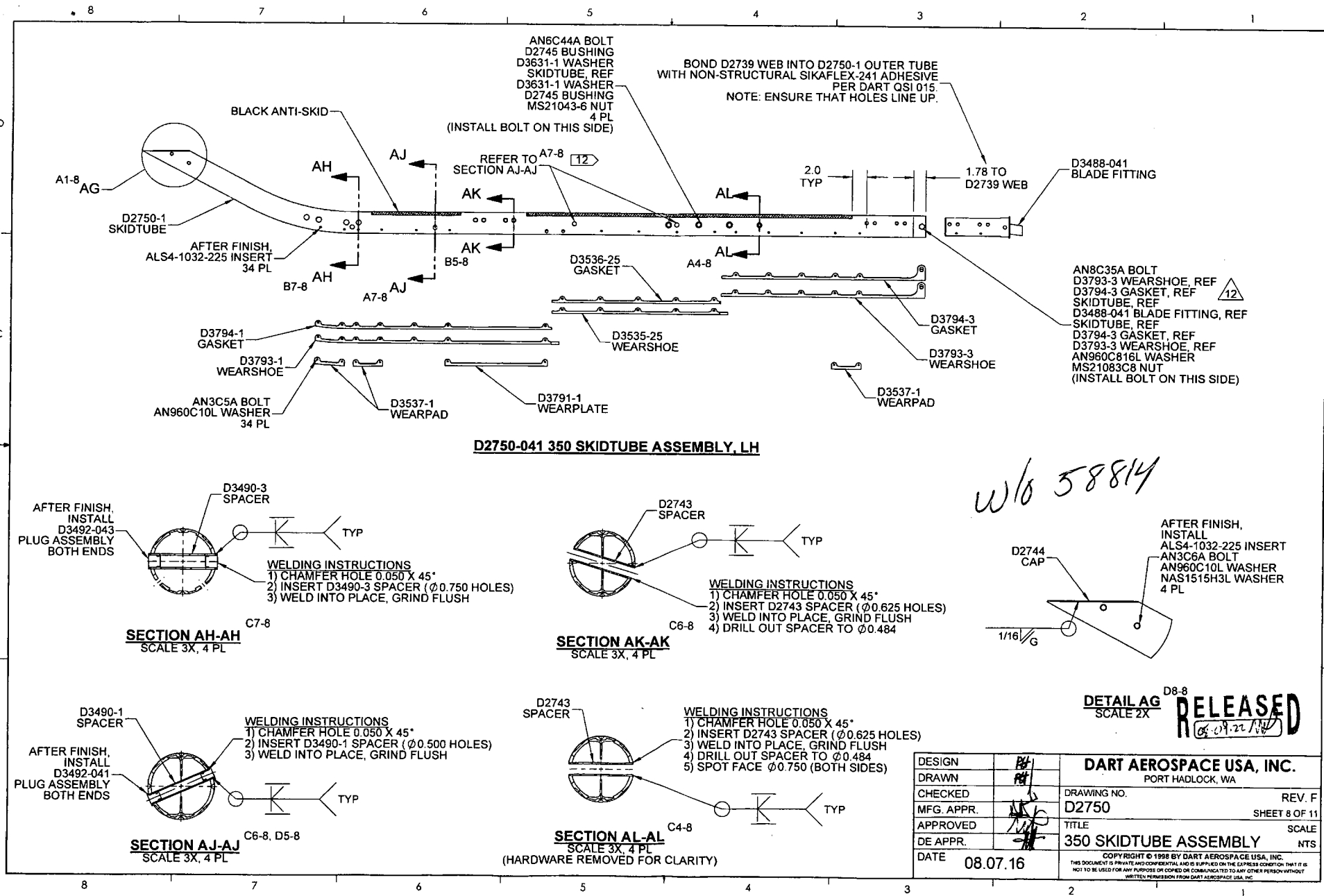
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

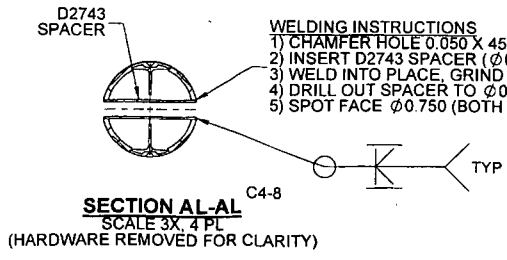
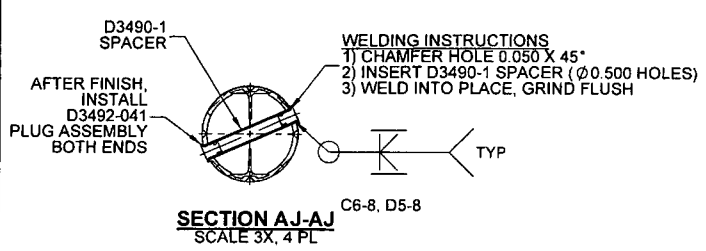
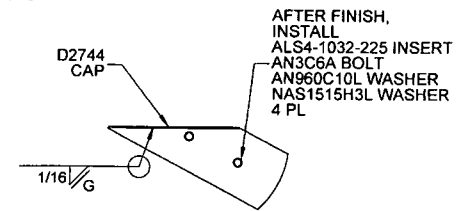
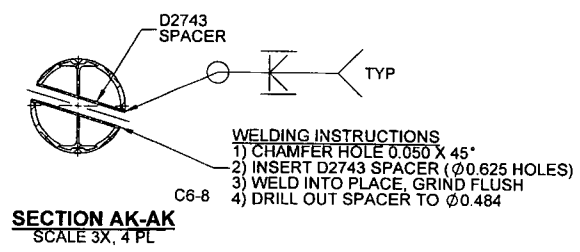
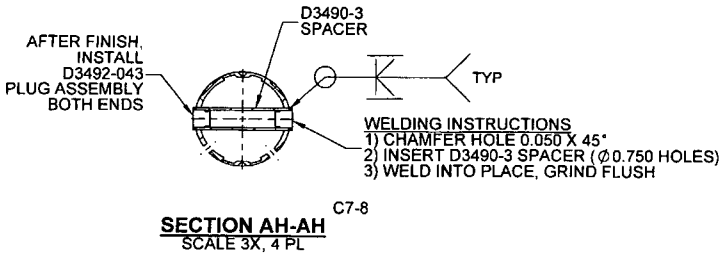
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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D2750-041 350 SKIDTUBE ASSEMBLY, LH

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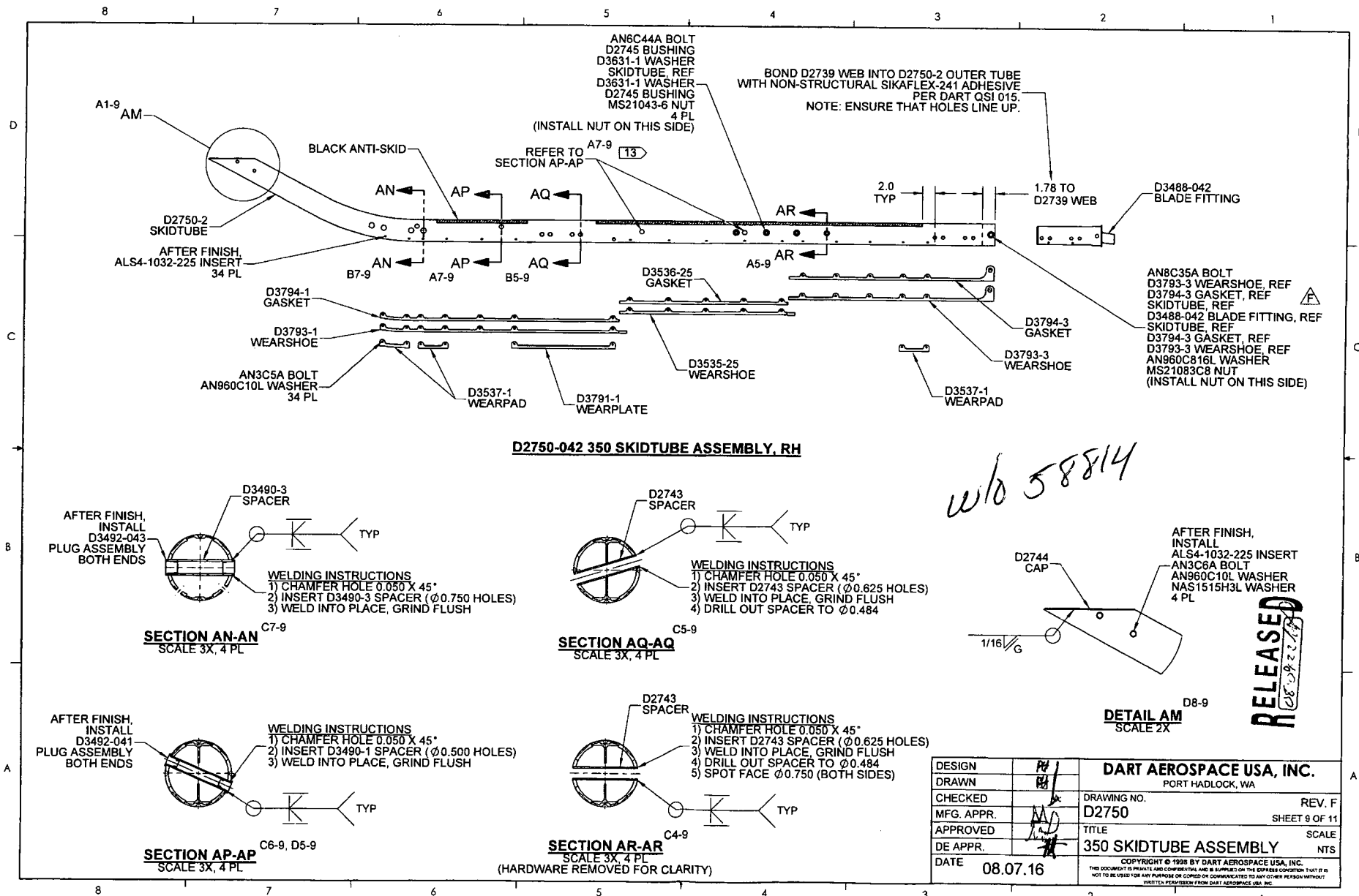
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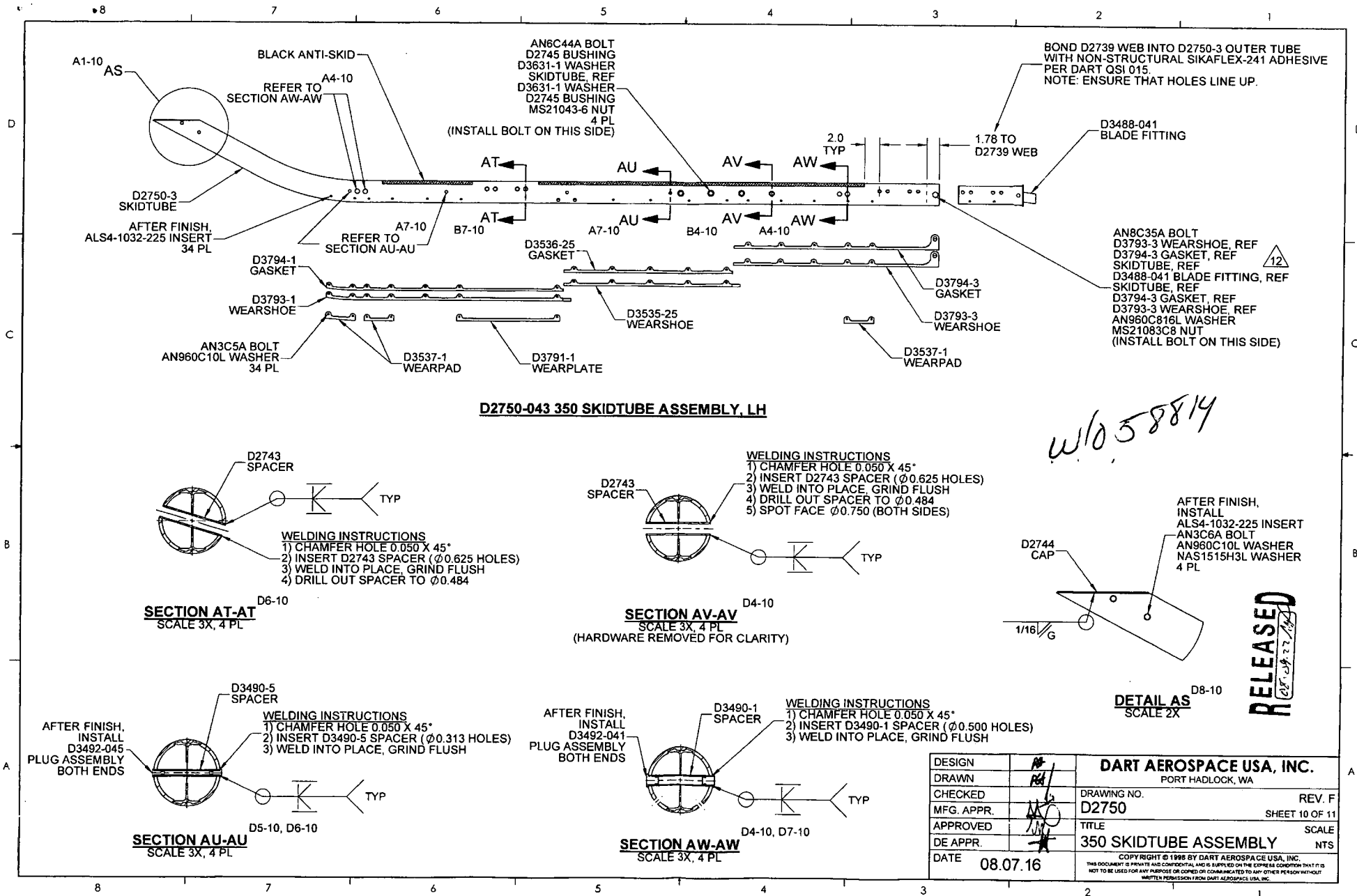
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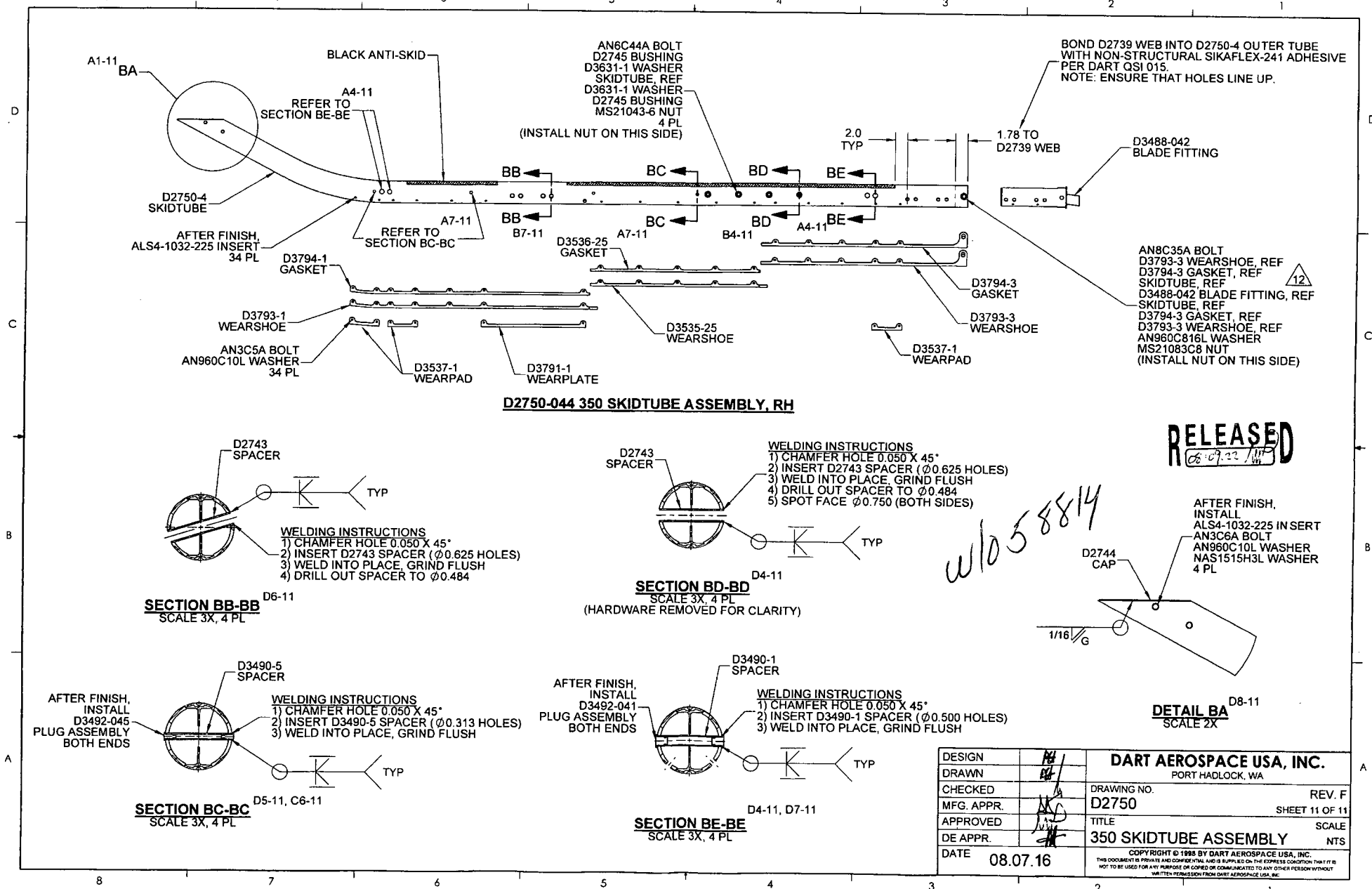
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 233

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 53816
Part number: D350-686014
Description: 350 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Pat. Dunn Date of Test Coupon 10.06.01

Welder Barday Elliott Date of Test Coupon 10.06.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld